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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/523,323	02/24/2005	Akira Fujinoki	37904-0055	7684

28481 7590 03/21/2007

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EXAMINER	
GREEN, ANTHONY J	
ART UNIT	**PAPER NUMBER**
1755	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/21/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/523,323	FUJINOKI ET AL.	
	Examiner	Art Unit	
	Anthony J. Green	1755	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *31 January 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☒ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *1/31/05*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. The preliminary amendment submitted on 24 February 2005 has been entered. **Applicant's amendment contains 2 claims numbered as "10" and accordingly claim 10 (second occurrence) is supposed to be claim 14 and the claims numbered as 14-20 should be renumbered as claims 15-21. Also the amendment is not of proper form as it is not proper to use strikethrough and single brackets to show that which is to be deleted. Accordingly applicant needs to make sure that the claims are properly renumbered and/or amended in response to this office action to avoid a notice of non-compliant amendment being sent out.**

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohashi et al (US Patent No. 6,143,676A).

The reference teaches, in the abstract, the examples, and the claims, a synthetic silica glass optical material for high output power vacuum ultraviolet rays made from ultra high purity synthetic silica glass for use in the wavelength region of from 165 to 195 nm, containing OH groups at a concentration of from 5 to 300 wt ppm with a

fluctuation width in OH group concentration of 10 wt ppm or less, containing hydrogen molecules at a concentration of from $1x10^{17}$ - $1x10^{19}$ and a chlorine content of less than 50 ppm more preferably less than 10 ppm.

The instant claims are rendered obvious by the reference. The limitation of "adapted to be used with a higher .....order of harmonic" is an ultimate intended use and as such adds little or no patentable weight to the claim. While the reference does not teach the same OH concentration, a hydrogen molecule concentration, and a chlorine content as instantly claimed it does teach ranges that encompass that which is instantly claimed. However, one of ordinary skill in the art at the time the invention was made would have considered the invention to have been obvious because the compositional proportions taught by the reference overlap the instantly claimed proportions and therefore are considered to establish a prima facie case of obviousness. It would have been obvious to one of ordinary skill in the art to select any portion of the disclosed ranges including the instantly claimed ranges from the ranges disclosed in the prior art reference, particularly in view of the fact that;

> "The normal desire of scientists or artisans to improve upon what is already generally known provides the motivation to determine where in a disclosed set of percentage ranges is the optimum combination of percentages", In re Peterson 65 USPQ2d 1379 (CAFC 2003).

Also, In re Geisler 43 USPQ2d 1365 (Fed. Cir. 1997); In re Woodruff, 16 USPQ2d 1934 (CCPA 1976); In re Malagari, 182 USPQ 549, 553 (CCPA 1974) and MPEP 2144.05.

As for the properties of transmittance at a wavelength of 245 nm and fictive temperature

these appear to be inherent properties possessed by the glass of the material as the composition is the same absent evidence showing otherwise.

4. Claims 1-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamagata et al (US Patent No. 5,325,230A).

The reference teaches, in the abstract, the examples, and the claims, synthetic optical members made of high-purity synthetic silica glass material containing at least about 50 wt. ppm of OH groups, and are doped with hydrogen. The examples recite a hydrogen molecule concentration ranging from $1x10^{16}$ - $4x10^{19}$, see especially examples 7-8, 12-14 and 18-20 which possess a hydrogen molecule concentration that falls within the instantly claimed range. Also see column 1, lines 15+ and claim 6 which recites that the optical member may be exposed to a YAG fourth harmonics laser beam.

The instant claims are rendered obvious by the reference. While the reference does not teach the same OH concentration, hydrogen molecule concentration, and a chlorine content as instantly claimed it does teach ranges that encompass that which is instantly claimed. However, one of ordinary skill in the art at the time the invention was made would have considered the invention to have been obvious because the compositional proportions taught by the reference overlap the instantly claimed proportions and therefore are considered to establish a prima facie case of obviousness. It would have been obvious to one of ordinary skill in the art to select any

portion of the disclosed ranges including the instantly claimed ranges from the ranges disclosed in the prior art reference, particularly in view of the fact that;

> "The normal desire of scientists or artisans to improve upon what is already generally known provides the motivation to determine where in a disclosed set of percentage ranges is the optimum combination of percentages", In re Peterson 65 USPQ2d 1379 (CAFC 2003).

Also, In re Geisler 43 USPQ2d 1365 (Fed. Cir. 1997); In re Woodruff, 16 USPQ2d 1934 (CCPA 1976); In re Malagari, 182 USPQ 549, 553 (CCPA 1974) and MPEP 2144.05. As for the properties of transmittance at a wavelength of 245 nm, fictive temperature, and damage threshold values these appear to be inherent properties possessed by the glass of the material as the composition is the same absent evidence showing otherwise. As for the amount of chlorine, since the reference recites no chlorine content this meets claim 2 as claim 2 reads on no chlorine being present. As for the irradiating steps of method claim 19 (as renumbered, originally claim 18) this appears to be a matter of obvious choice or design best determinable through routine experimentation and optimization within the art and producing no unexpected results absent evidence to the contrary.

5. Claims 1-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamagata et al (US Patent No. 5,086,352A).

The reference teaches, in the abstract, the examples, and the claims, synthetic optical members made of high-purity synthetic silica glass material containing at least about 100 wt. ppm of OH groups, and are doped with hydrogen in a hydrogen ion

concentration ranging from $5x10^{16}$ - $5x10^{19}$ (see claim 2). Examples 7-8, 12-14 and 18-20 recite a hydrogen molecule concentration ranging from $1x10^{16}$ - $4x10^{19}$. Also see column 1, lines 7+ and claim 10 which recites that the optical member may be exposed to a YAG fourth harmonics laser beam.

The instant claims are rendered obvious by the reference. While the reference does not teach the same OH concentration, hydrogen molecule concentration, and a chlorine content as instantly claimed it does teach ranges that encompass that which is instantly claimed. However, one of ordinary skill in the art at the time the invention was made would have considered the invention to have been obvious because the compositional proportions taught by the reference overlap the instantly claimed proportions and therefore are considered to establish a prima facie case of obviousness. It would have been obvious to one of ordinary skill in the art to select any portion of the disclosed ranges including the instantly claimed ranges from the ranges disclosed in the prior art reference, particularly in view of the fact that;

> "The normal desire of scientists or artisans to improve upon what is already generally known provides the motivation to determine where in a disclosed set of percentage ranges is the optimum combination of percentages", In re Peterson 65 USPQ2d 1379 (CAFC 2003).

Also, In re Geisler 43 USPQ2d 1365 (Fed. Cir. 1997); In re Woodruff, 16 USPQ2d 1934 (CCPA 1976); In re Malagari, 182 USPQ 549, 553 (CCPA 1974) and MPEP 2144.05. As for the properties of transmittance at a wavelength of 245 nm, fictive temperature, and damage threshold values these appear to be inherent properties possessed by the glass of the material as the composition is the same absent evidence showing

otherwise. As for the amount of chlorine, since the reference recites no chlorine content this meets claim 2 as claim 2 reads on no chlorine being present. As for the irradiating steps of method claim 19 (as renumbered, originally claim 18) this appears to be a matter of obvious choice or design best determinable through routine experimentation and optimization within the art and producing no unexpected results absent evidence to the contrary.

6. Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ikuta et al (US Patent Application Publication No. 20030051507 A1).

The reference teaches, in examples 14-16, ct, the examples, and the claims, synthetic silica glasses made of high-purity synthetic silica glass material containing at from 28 to 180 ppm of OH groups, and a hydrogen molecule concentration ranging from $3.3x10^{18}$ - $3.46x10^{18}$.

The instant claims are rendered obvious by the reference. The limitation of "adapted to be used with a higher .....order of harmonic" is an ultimate intended use and as such adds little or no patentable weight to the claim. While the reference does not teach the same OH concentration, hydrogen molecule concentration, and a chlorine content as instantly claimed it does teach ranges that encompass that which is instantly claimed. However, one of ordinary skill in the art at the time the invention was made would have considered the invention to have been obvious because the compositional proportions taught by the reference overlap the instantly claimed proportions and therefore are considered to establish a prima facie case of obviousness. It would have

been obvious to one of ordinary skill in the art to select any portion of the disclosed ranges including the instantly claimed ranges from the ranges disclosed in the prior art reference, particularly in view of the fact that;

> "The normal desire of scientists or artisans to improve upon what is already generally known provides the motivation to determine where in a disclosed set of percentage ranges is the optimum combination of percentages", In re Peterson 65 USPQ2d 1379 (CAFC 2003).

Also, In re Geisler 43 USPQ2d 1365 (Fed. Cir. 1997); In re Woodruff, 16 USPQ2d 1934 (CCPA 1976); In re Malagari, 182 USPQ 549, 553 (CCPA 1974) and MPEP 2144.05. As for the properties of transmittance at a wavelength of 245 nm, fictive temperature, and damage threshold values these appear to be inherent properties possessed by the glass of the material as the composition is the same absent evidence showing otherwise.

7. Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Patent Specification No. 2002-87833A.

The reference teaches, in the abstract and in the Table on page 2, synthetic silica glasses containing from 10-30 ppm of OH groups and a hydrogen molecule concentration ranging from $4x10^{17}$ - $8x10^{18}$.

The instant claims are rendered obvious by the reference. The limitation of "adapted to be used with a higher .....order of harmonic" is an ultimate intended use and as such adds little or no patentable weight to the claim. While the reference does not teach the same OH concentration, hydrogen molecule concentration, and a chlorine

content as instantly claimed it does teach ranges that encompass that which is instantly claimed. However, one of ordinary skill in the art at the time the invention was made would have considered the invention to have been obvious because the compositional proportions taught by the reference overlap the instantly claimed proportions and therefore are considered to establish a prima facie case of obviousness. It would have been obvious to one of ordinary skill in the art to select any portion of the disclosed ranges including the instantly claimed ranges from the ranges disclosed in the prior art reference, particularly in view of the fact that;

> "The normal desire of scientists or artisans to improve upon what is already generally known provides the motivation to determine where in a disclosed set of percentage ranges is the optimum combination of percentages", In re Peterson 65 USPQ2d 1379 (CAFC 2003).

Also, In re Geisler 43 USPQ2d 1365 (Fed. Cir. 1997); In re Woodruff, 16 USPQ2d 1934 (CCPA 1976); In re Malagari, 182 USPQ 549, 553 (CCPA 1974) and MPEP 2144.05. As for the amount of chlorine, since the reference recites no chlorine content this meets claim 2 as claim 2 reads on no chlorine being present. As for the properties of transmittance at a wavelength of 245 nm, fictive temperature, and damage threshold values these appear to be inherent properties possessed by the glass of the material as the composition is the same absent evidence showing otherwise.

Priority

8. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Japan on 07/31/02. It is noted, however, that applicant has not filed a certified copy of the Japanese application as required by 35 U.S.C. 119(b).

Specification

9. The abstract of the disclosure is objected to because it is not in the form of a single paragraph which is free of extraneous material. Correction is required. See MPEP § 608.01(b).

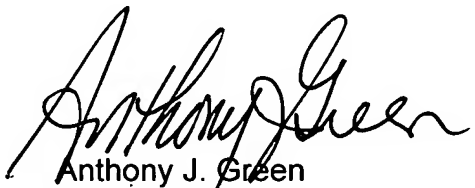
Information Disclosure Statement

10. The foreign references and the non patent literature reference cited on the information disclosure statement filed 31 January 2005 were not considered as the IDS fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each cited foreign patent document; each non-patent literature publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. Accordingly since no copies of these documents were provided these references have not been considered.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anthony J. Green whose telephone number is 571-272-1367. The examiner can normally be reached on Monday-Thursday 6:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo can be reached on 571-272-1233. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Anthony J. Green
Primary Examiner
Art Unit 1755

ajg
March 15, 2007